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United States Department of Agriculture
Forest Service
Manti-La Sal National Forest
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File Code: 2820-4

Date: February 6, 1997

Utah Division of Oil, Gas and Mining
ATTN: Mr. Mike Suflita
1594 West North Temple
Salt Lake City, Utah 84114

Copy Mike

RE: Installation of Culvert in Crandall Creek to Expand Surface Facilities, Crandall Canyon Mine, Genwal Resources, Inc., ACT/015/032-961, Folder #2, Emery County, Utah

Dear Mike,

We have reviewed Genwal's "Revised Chapter 7 for the Culvert Expansion Permit Amendment; Crandall Canyon Mine, ACT/015/032" dated January 8, 1997, and our own comments (dated April 1, 1996) on Genwal's original proposal. A number of issues from our first letter have not been addressed and are summarized below. Our initial comments are listed with our comments on the revision in **bold** text.

Chapter 2 - Soils

Addendum to Appendix 2-3B, Section 3.0

This section begins with a statement that there are no wetlands along the proposed culvert route. However, the Biology chapter has a description of a riparian vegetation community in the proposed project area. A Forest Service inventory also shows the area has a narrow strip of wetland along the stream. The proposed project area is the transition from a CR2 riparian community downstream to a CR3 type upstream.

The revised submittal has not addressed this issue at all.

Chapter 3 - Biology

Page 3-4, last paragraph

The description of the elk is from 1980. Describe the current status.

The revised submittal has not addressed this issue at all.

Page 3-14, first paragraph

The Division of Wildlife Resources letter in Appendix 3-2 does not lead to the conclusion that "no upstream fisheries habitat will be negatively effected". The 1995 surveys (Appendix 3-2) were taken in late June and August and do not give any kind of picture of the function of the higher reaches of the creek for this cutthroat population. This culvert would cause a significant loss of habitat and will affect the populations ability to access headwater areas (Young, M. K., Resident trout and movement: consequences of a new paradigm, *Fish Habitat Relationships Currents*, U.S. Forest Service publication).

Genwal still states there will be no upstream impact on fisheries, but they do not provide any data to support their claim. They should remove the statement or provide justification.

Page 3-21, first and second paragraphs

The riparian community type has been classified as Salix boothii/ Equisetum arvense with a mix of mesic forbs. The site should be reclaimed to reestablish this community.

This issue has not been addressed.

Chapters 4 and 7 - Air and Water Quality

The Forest Service is concerned that coal dust from the open storage pile may migrate beyond the containment area and impact air and water quality on the Forest. This must be discussed in Chapters 4 and 7. It has been our experience that open coal piles tend to expand beyond approved design limits with time. Genwal must provide physical barriers to define the approved perimeter of the coal storage area and specifically discuss how coal would be prevented from spilling onto the Crandall Canyon road.

This issue has not been addressed.

Chapter 5 - Engineering

Page 5-15, fifth paragraph

Genwal commits to mine no closer than 500 feet to the Joes Valley Fault. In another portion of the plan, they state they will stay 1,000 feet from the fault. The distance from the fault is based on an angle-of-draw, which varies with overburden, and is thus not a constant distance. Both these statements must be corrected to conform to Forest Service Stipulation #20, which is a part of Genwal's lease, which states that "mining that would cause subsidence will not be permitted within a zone along the Joes Valley Fault determined by projecting a 22 degree angle-of-draw (from vertical) eastward from the surface expression of the Joes Valley Fault, down to the top of the coal seam to be mined."

Genwal has not addressed this issue. They also state in their revision that a 20 degree angle-of-draw will be used. The 22 degree angle-of-draw must be used unless they can demonstrate that 20 degrees is adequate, and gain approval from the Forest Service. Genwal must show the calculations to demonstrate that the protection zone along the fault is adequate.

Page 5-22, section 5.25.1.5

If there is ground lowering, tensional fractures would also be expected around the margins of the subsided area.

They have not corrected this section.

Page 5-32, second paragraph

On the fifth line, remove the word "primarily" so that it reads "was preserved for recreational/forest service parking".

The Forest Service is concerned with sediment input to Crandall Creek. The Forest Service consented to the use of the sediment pond for snow storage only to keep snow and road traction material (sand) from being pushed off the sides of the road which caused the sand to wash into Crandall Creek. Genwal must include computations to show that the sediment pond is adequate in size to hold both snow and runoff and still function effectively as a sediment pond, or find another place to pile the snow that will report to the sediment pond. They must also include a discussion of where the material from the sediment pond would be dried before disposal.

This issue was not addressed.

Page 5-33, second full paragraph

The wastes described are solid wastes, as defined by the Resource Conservation and Recovery Act (RCRA), and must be disposed of in a RCRA-permitted facility. They can not be left in the mine.

This issue was not addressed.

Page 5-33, last paragraph

Oil and gas spills must be cleaned-up immediately. Contaminated soil must be removed from the forest to a permitted facility.

This issue was not addressed. There is a statement in the revision that contaminated soil will not be removed until an area of 10 square feet is saturated. This is not acceptable to the Forest Service.

Page 5-45, section 5.42.6

They need to state that the entire asphalt road surface will be removed and disposed of at a RCRA-permitted solid waste facility.

This issue was not addressed.

Page 5-45, section 5.42.7

There is no mention of clean-up of the spilled coal from the current loadout. When the new loadout is built, the previous site must be cleaned thoroughly.

This issue was not addressed.

Page 5-47, third paragraph

These materials would be classed as solid wastes under RCRA and must be taken to a licensed disposal facility. They can not be disposed of in the mine.

This issue was not addressed.

Appendix 5-20

This section needs a description of the type of fill material to be used and how it would be compacted. To minimize the spread of noxious weeds on the forest, any fill material transported on Forest Development Roads must be from a site free of noxious weeds.

All asphalt must be removed from the forest and taken to a licensed disposal facility.

These issues were not addressed.

Chapter 7 - Hydrology

Page 7-15, first paragraph

A visual estimate of flow is not sufficient. Flow can easily and accurately be measured with a bucket and a stopwatch.

This issue was not addressed. UDOGM should require flows to be measured, not estimated.

Page 7-16, third paragraph

This paragraph contradicts the generally accepted theory that the North Horn Formation is an aquiclude, not a recharge unit. Typically in the Wasatch Plateau, the North Horn Formation actually prohibits downward movement of ground water due to the high shale content and presence of swelling clays. The North Horn Formation generally has the most spring occurrences due to shales acting as perching beds and forming perched water-bearing zones that issue water to springs where saturated zones intercept incised canyons.

This issue was not addressed. In the revised text, paragraphs three and four of page 7-4 contradict paragraph 3 of page 7-5.

Page 7-18, fourth paragraph

The statement that there is no direct communication between the North Horn Formation and the Star Point regional aquifer may not be correct. With the presence of fractures and joint systems common in the Wasatch Plateau, it is possible that hydraulic connection exists in localized areas between units.

This issue was not addressed.

Page 7-22, first paragraph

The statement that ground water from the Star Point Sandstone does not discharge into Crandall Creek is probably valid at the mine site. However, there are no data showing that there may not be discharge into the creek downstream and down-gradient.

This issue was not addressed.

Page 7-26, first paragraph

Give a reference for the data presented on ground water conditions on East Mountain.

This was not done.

Page 7-26, first full paragraph

The Probable Hydrologic Consequences section needs to include a discussion of colluvial flow contributions to Crandall Creek. The areas of sloughage on the north-facing slope along the creek indicate near-surface flow which would probably be contributed to the creek in the vicinity of the proposed culvert. The culvert could definitely have in impact on the hydrology.

This issue was not addressed.

Page 7-37, Precipitation section

What is the period used to determine these averages? Are they water equivalents?

This was not answered.

Page 7-37, Temperature and Evaporation sections

Cites a reference for these data.

This was not done.

Page 7-40, third paragraph

To ensure that proper holding times are met, samples should be labeled with the date and time of collection.

This was not addressed.

Page 7-68, fifth paragraph

The runoff water from the undisturbed area which flows onto the disturbed area will have to be dealt with in the NPDES permit in the same way that water from disturbed areas is handled.

This was not addressed.

Page 7-71, sections 7.52 through 7.55

The company must specify how they are going to satisfy these requirements. Their statements just say they will comply with the regulations, not what they plan to actually do for compliance.

This was not addressed.

Several general concerns were also listed in our letter of April 1, 1996, **none of which were addressed:**

1. Forest Development Road 50248 must be returned to double lane width after the construction is completed, and a public right-of-way granted to the Forest Service, to allow uninfringed public access to the trailhead parking and turnaround area.

2. Concrete energy dissipator design data are presented for the outlet of the culvert, but a gabion energy dissipator has been substituted. Genwal must provide design data to demonstrate that a gabion energy dissipator can resist the design forces. Channel slopes of 7% were used for velocity calculations through the culvert. The overall channel slope within the canyon is also 7%. Why was the natural channel slope selected as 3.9% as a localized situation without a specific channel profile?

3. The Forest Service is concerned that the sand fill proposed for placement below the culvert will be washed into lower sections of Crandall Creek on the Forest. Genwal should describe the intended function of the sand fill, how the sand would be retained and migration of fines prevented, and how water would be collected/monitored and returned to the stream.

Please contact Dale Harber at (801) 637-2817 if you have any questions.

Sincerely,

for
JANETTE KAISER
Forest Supervisor